The late Pleistocene fossil vertebrates from the Talara tar seeps, Perú, and Corralito, Ecuador, with particular reference to the Carnivora

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A. G. Edmund collected more than 27,000 fossil bones from the late Pleistocene tar seep deposit near Talara, Piura, Peru, in January 1958. Of the identified 26,873 specimens housed in the Vertebrate Paleontology Department of the Royal Ontario Museum, 63.1% represent mammals, 34.7% birds and 2.1% reptiles, with trace amounts of amphibian remains. Of the 16,960 mammal specimens, Carnivora represent over 79% of the specimens. Seven species of Carnivora have been identified (Minimum number of individuals, MNI, in parentheses): the canids Lycalopex sechurae (Thomas) (101) and Canis dirus Leidy (51), the felids Smilodon fatalis (Leidy) (20), Panthera onca (Linnaeus) (3), Puma concolor (Linnaeus) (3) and Leopardus sp. (2), and the mustelid Conepatus talarae Churcher and Van Zyll de Jong (7). The MNI is usually based on podial elements. Although Panthera atrox (Leidy) was reported from Talara, this report was in error and the specimen is now recognized as a large jaguar. This site compares well with the famous Rancho La Brea deposits in California, USA; they are of similar age, carnivorans dominate, a high proportion of juveniles and subadults are present (35% to 47% depending on the species), and a significant number of Canis dirus specimens show skeletal pathologies. A habitat with more water than is present today is indicated by this fauna. Edmund collected an additional 4,470 late Pleistocene vertebrate fossils from the nearby Corralito site and several other minor locations in Guayas province, Ecuador in 1961. Of this total, 95% represent mammals and 5% reptiles, with trace amounts of amphibian and avian remains. Unlike Talara, of the 4,225 mammal specimens, Carnivora represent less than 2% of the specimens, with only Smilodon (2) and Lycalopex (1) recorded. Species of extinct Xenarthra (90% of the specimens) and Artiodactyla (6.6% of the specimens) predominate in these faunas. Although seeped oil was present in these deposits, sedimentological and paleontological evidence suggest that these Ecuadorian sites were fluvially deposited and did not function as carnivore traps as did the Talara tar seeps. Rather the presence of hydrocarbons in the bones is a secondary event and is the result of oil seeping into the bones and the surrounding sediments after their initial deposition and burial.

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